CLAIM AMENDMENTS

Claim 1 (currently amended): A thermally stable, non-woven, fibrous paper, comprising:

- at least one polymer represented by structural formula I:

- wherein R_{1-6} are the same or different and comprise H, a hydroxyl group, a straight or branched alkyl, cycloalkyl, polycycloalkyl, heterocycloalkyl, alkaryl, alkoxy, aryl, aralkyl, alkenyl, or alkynyl group containing approximately 1 to approximately 50 carbon atom(s), carbonyls, esters, carbonates, amides, ketenes, epoxides, a silyl or siloxyl group containing approximately 1 to approximately 50 silicon atom(s), and combinations thereof;
- wherein X₁₋₄ are the same or different and comprise N, O, S or Se; and
- wherein n is an integer ranging in value from 1 to approximately 10,000; and
- wherein the thermally stable, non-woven, fibrous paper is thermally stable to at least 650 degrees centigrade.

Claim 2 (original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein R_{1-6} are the same or different and comprise H, a hydroxyl group, a straight or branched alkyl, cycloalkyl, polycycloalkyl, heterocycloalkyl, alkaryl, alkoxy, aryl, aralkyl, alkenyl, or alkynyl group containing approximately 1 to approximately 50 carbon atom(s), carbonyls, esters,

carbonates, amides, ketenes, epoxides, a silyl or siloxyl group containing approximately 1 to approximately 50 silicon atom(s), and combinations thereof; wherein X_{1-2} comprise N; wherein X_{3-4} comprise O; and wherein n is an integer ranging in value from 1 to approximately 10,000.

Claim 3 (original): The thermally stable, non-woven, fibrous paper according to claim 2, wherein R_{1-6} comprise H; wherein X_{1-2} comprise N; wherein X_{3-4} comprise O; and wherein n is an integer ranging in value from 1 to approximately 10,000.

Claim 4 (original): The thermally stable, non-woven, fibrous paper according to claim 3, wherein R_{1-6} comprise H; wherein X_{1-2} comprise N; wherein X_{3-4} comprise O; and wherein n is an integer ranging in value from 1 to approximately 5,000.

Claim 5-10 (canceled)

Claim \(\text{(original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein the paper further comprises a binder.

Claim 12 (original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein the paper further comprises water.

Claim 13 (original): The thermally stable, non-woven, fibrous paper according to claim 12, wherein the concentration of the water is less than 5 weight percent.

Claim 14 (original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein the concentration of the at least one polymer represented by structural formula I ranges from approximately 50 to approximately 100 weight percent.

Claim 15 (original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein the paper further comprises a pH modifier.

Claim 16 (original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein the paper is incorporated into a honeycomb core.

Claim 17 (original): The thermally stable, non-woven, fibrous paper according to claim 1, wherein the paper is doped with a transition metal.

Claim 18 (original): A thermally stable, non-woven, fibrous paper, comprising:

- at least one binder;
- water; and
- at least one polymer represented by structural formula I:

A A

- wherein R_{1-6} are the same or different and comprise H, a hydroxyl group, a straight or branched alkyl, cycloalkyl, polycycloalkyl, heterocycloalkyl, alkaryl, alkoxy, aryl, aralkyl, alkenyl, or alkynyl group containing approximately 1 to approximately 50 carbon atom(s), carbonyls, esters, carbonates, amides, ketenes, epoxides, a silyl or siloxyl group containing approximately 1 to approximately 50 silicon atom(s), and combinations thereof;
- wherein X₁₋₄ are the same or different and comprise N, O, S, or Se; and
- wherein n is an integer ranging in value from 1 to approximately 10,000.